HAMATEUR CHATTER

The Milwaukee Radio Amateurs Club

January 2010, Volume 18, Issue 1

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

Presidents Letter

NEW. A NEW year (Happy New Year!) A NEW decade. NEW plans at MRAC. At the end of this NEW decade MRAC will be over 100 years old. If MRAC is going to make it to 100 we need to plan for the future. We need to be a club that is interesting, has NEW ideas, has the support of the membership, continues to grow the membership and in the process adapts to the interest of the membership.

To this end we have been making progress. For the first time in a long time we have programs scheduled thru June (to September if you count we won't meet in July and August). This means we still need three program ideas to finish out the year. Talk to any board member or put a message on the Yahoo Group.

REMEMBER the meeting date has changed this month. You'll be getting this edition of the newsletter early because the meeting date is moved up one week to January 21st. The church as a multi-day function scheduled on our normal Thursday.

We have as special guest speaker at this month's meeting. Todd Sprinkmann KC9BQA will talk to us about simplex operations. As you may be aware Todd has been very active in building weak signal UHF/VHF simplex operations in SE Wisconsin (and beyond). You can find his name in *QST Contest Corral.* We've asked Todd to present at this month's meeting because it is our last membership meeting before the FM Simplex Contest. For newer members, MRAC sponsors this contest as a means to promote use of simplex and to introduce hams to contesting. Some are serious about scoring but the contest has a 'mentoring' flavor to help those new to simplex and contests. Todd will share his experience & knowledge and maybe recruit a few new weak signal UHF/VHF enthusiasts in the process.

Speaking of the FM Simplex Contest, there is a club entry category. When you make your entry (to win an individual award) you designate your club affiliation. The club with the best total gets recognized on a plaque kept on the wall at AES.

MRAC hasn't won the contest since the first year (maybe second). If just twenty members put in an average score it would be a lock for us to win our own contest. Let's see if MRAC can reclaim it's own contest THIS year.

DUES are due this month. Dues are still $17 for the year. Please obtain a copy of the renewal application and fill it out when paying. This is our only record of dues payment. Note that MRAC changed its mailing address last year and if you mail in your form you need to use the new address. It is listed elsewhere in this newsletter. MRAC didn't attend to getting renewals last year and we had a big drop in membership. We need to fix that this year to prevent the club from becoming extinct and/or financially broke. The club had problems with this before and much effort was invested to fix it. We don't need to take on any new problems and not ones we've worked to fix before. Please pay early and help us recruit new members. [Remember thirty-nine for the club meeting]. Promoting and growing the club is a part of being a member! Another factor this year is we will publish a membership directory as required by the bylaws and only paid members will be listed. Make sure you're included!

We have made some progress on getting the board staffed. Michael Harris KC9CMT has agreed to move from his director position to club secretary. Hal Newton has agreed to fill the vacated director position, with the understanding that his job makes him less available during the tax season. I wish to thank both of them for stepping up. Michael has been very active and extremely helpful with rebuilding/restarting some activities that had fallen by the wayside. I've worked with Hal on the board previously and respect his input. They are excellent examples of the support we need within MRAC as we go forward.

This leaves only the treasurer position open. This spot was 'vacated' when I became president back in June. I say 'vacated' because I've been doing both jobs since June. We've contacted numerous members, asked for volunteers at each meeting and in every newsletter. Yet we still have the opening. In another month we will begin looking for nominations for officers and directors for the

MRAC Officers:

Terms Expiring in 2010

- President – Mark, AB9CD
- V-President-Brian, K9LCQ
- Secretary – Mike, KC9CMT
- Treasurer – Vacant
- Director – Dave,WB9BWP
- Director – Dave,KA9WXN

Terms Expiring in 2011

- Director – Al, KC9IJJ
- Director – Hal ,WB9OZN
- Director – Dwain,KC9MJJ

The Club Phone Number is: (414) 332-MRAC or

(414) 332- 6 7 2 2

Visit our website at:

www.w9rh.org

Mail correspondence to:

M. R. A. C.

P.O. Box 240545

Milwaukee, WI 53223

President's Letter Conclusion:

election in May. You will decide on new leadership. Many think the treasurers position is the most work among the officer positions. I don't find it that difficult. If we are not able to fill this position before nominations near completion, I will run for the "toughest" position to fill, treasurer. The implication here is obvious.

If we can complete staffing of the board we are poised to start growing the club. We have many of the logistic problems behind us and for the few that remain we can see the light at the end of the tunnel.

Another worrisome situation involves field day (FD). We will soon need to reserve our date at Pioneer Village (if we chose to return there). We must have a FD captain appointed soon if MRAC will participate. If this person recruits a person or two to assist the effort required isn't that demanding. We refurbished our antennas last year and procured new feed line. All the equipment is stored on site. This minimizes the preparation efforts. An inventory of all the supporting equipment is available so the FD organizers know what they have to work with. Members are willing to bring equipment to operate. We will likely add some additional feed line this year to allow better placement of antennas. The point is we have worked to make this effort easier. If no one steps forward MRAC will miss participating in FD for the first time ever. It would wreck a perfect record. Who wishes to see this doesn't happen? Talk to any board member or express your interest on the Yahoo Group.

It is the start of new year. What better time to commit to your club? It is YOUR club and IS what you make it.

Mark AB9CD

Board of Director's Meeting Minutes

Meeting called to order at 7:00 PM.

Present: Brian, K9LCQ, Dave, KA9WXN Mark, AB9CD, Dwain, KC9MJJ Dave DeFebo, WB9BWP Michael, KC9CMT.

Secretary report read by Mark, AB9CD. Motion to accept by KA9WXN. Second by Dave, KC9MJJ. Accepted by a vote of 6-0

Treasurer report by Mark, AB9CD. Motion to accept by KC9CMT. Second by KA9WXN. Accepted by a vote of 6-0.

PRELIMINARY DSCUSSIONS:

Library Dates set for the 2010 Board of Director Meeting sessions at the Menominee Falls Library Conference room.

Need Labels and boxes for DVD's of club history that will be given out at various swapfests and other functions.

Repeater Report:

Repeater reported to be running fine.

Rain Report progress: No progress until 2010.

Donation needs to be sent to Pioneer Village for the use of their facilities during Field day.

Old Business:

Nominees for Secretary, Treasurer & Director. Dwain Runnels, KC9MJJ, and Harold Newton (Hal) has accepted the directors position openings. Michael, KC9CMT accepted the lateral move from the Board of Directors to the position of Club Secretary.

Life Member Review: Will discuss in depth in January 2010 Meeting.

Sound System: No progress to report. This will be investigated with donation to church early in 2010.

Club email address: The club email address now forwards to AB9CD.

Programs:

January: FM Simplex Contest.

February: Big Antennas, Dick Wood

March: Log Book of the World Program.

April: Show & Tell Night. Fix ups Etc.. Projects or New Purchases from the Membership.

May: Elections and the annual Auction. Hosted by Dave DeFebo.

New Business:

Swapfest table: MRAC will purchase a table at the MRC swapfest. KC9IJJ to obtain table ticket.

Early meeting date: The January meeting is a week early due to Conflict with Church.

Chatter to Publish in December. Instead of Postal mailings in 2010, perhaps send Email link to Yahoo Group chatter posting.

Send second & third notice of renewal to all former members.

Club Project: Search for project that membership can work on and discuss during meetings.

Volunteers: Need volunteers for group activates such as Field day, AES Superfest table staffing etc..

Tek Scope donations to club. One tek scope will be brought to each meeting until supply exhausted.

Motion to adjourn at 8:32 PM . Motion made by Brian, K9LCQ, Second by Dwain, KC9MJJ. Passed 6-0.

Room returned to condition as found upon arrival.

Respectfully submitted,
Michael, KC9CMT

Membership Meeting Minutes

General Membership assemble called at 7:00pm.

Excellent program presented by Dave Shank, KA9WXN on Digital TV status: Southern Southeast Wisconsin has been reporting reception problems. FCC rule: 120 miles are to be between broadcast stations with same frequency. There is a Michigan station 124 miles east across lake. Directional antenna's seem to be an ongoing problem with the general public. Many in public do not understand technology, such as VHF/UHF. VHF antenna's do not pick up UHF very well. Many UHF only antenna's are being sold the public. Decoding the broadcast signal is the biggest problem, not signal strength or integrity. Dave gave a demonstration of various antenna configurations on a spectrometer he brought in. Best type of antenna seemed to be a Horizontal loop 36" long.

Fellowship break.

Meeting called to order at 8:35 PM.

Minutes of October meeting read and accepted. Motion made to accept by Rick, WB9GYT. Seconded by Dwain, KC9MJJ.

Treasurer's Report read and accepted by motion of Jerry, Seconded by Rick, WB9GYT

Passed Microphone for introductions of membership.

New Business:

Board of Directors meeting facility scheduled through 2010 at Menominee falls Library board meeting room.

Need Volunteers to head up Field day activities and to fill officer vacancies.

No Meeting in December, July or August. Attendance requested for Saturday morning breakfast at Maxium's in Brookfield.

No raffle in November; raffle to return in January.

Meeting adjourned at 9:00 PM.

Respectfully Submitted,

Michael, KC9CMT

2010 FM Simplex Contest

It's time again to start talking up the MRAC FM Simplex Contest, being held this year on February 21 starting at 1:00 pm CST. The rules remain the same as last year, with the four bands, 2m, 70cm, 6m and 1.25m each running at different times. The complete rules can be found on the club website at www.w9rh.org.

Once again we will have a bonus for contacting the club station, W9RH. Last year's Base Category winner, Dave, KA9WXN will be running the MRAC club station this time. Dave will have a good signal on all four bands.

We have been making an effort to be in the Contest Corral section of QST magazine and on the ARRL contest website. In addition to this, we received a nice mention on page 79 of the January QST magazine. A little extra promotion always helps!

My tips for this year:

Mark the date on your calendar so you don't forget!

Talk to your friends about the contest, the more the merrier!

Check your radios and antennas before the contest to verify everything is working properly.

Know your Grid Square, this can be found on qrz.com, arrl.org or just send me an email, I'll help you find out what it is.

Have fun!

I would like to thank the committee who help with the rules and promotion of the contest: Jeff, K9VS, Mark, AB9CD, Brian, K9LCQ and Sherm, KB9Q.

If anyone has questions regarding the contest, please feel free to contact me via email at n9ux@arrl.net.

I looking forward to hear a lot of club members on the air this year!

Joe

N9UX

Club Business Issues and Information

Wanted

Heroes, Leaders, People of integrity.

Your Hobby and it's oldest organization in Milwaukee, possibly even Wisconsin is beginning to falter. Your club needs volunteers to man very important missions that will lead your club, our hobby and it's members and even those who chose not to be club members onward into the future.

Our club is in need of people of character to man two very important positions within the foundation of our club.

The first position is one of Treasurer of our club. One may think that this is a very difficult and time consuming venture. Nothing could be further from the truth. I have to take my hat off to Mark, AB9CD to acknowledge the excellent job he has done in reorganizing the treasury here at the MRAC. He has it operating at such a high level of efficiency that one only would need to step in to the position and keep it going to achieve success.

The position description is that whoever volunteers to function as treasurer merely needs one hour a week to keep it operating at peek efficiency. Some bookkeeping needs to be done and a seat occupied at each meeting to facilitate the orderly disbursal of funds and take renewals and welcome new members. Most bank transactions may be accomplished via mail. A trip to the bank is only required a few times each year. A compilation of a simple report on the Treasurers' activities each month. The Treasurer is a club officer position. Attendance at the Board of Director's meeting and the Membership meeting every month is of upmost importance.

Our second important MRAC opening: Field Day Captain, I prefer to say coordinator. This volunteer will coordinate the activities at field day. Very simple, Make some phone calls, talk to some people. Help recruit people to man our clubs Field Day stations. I feel the hardest part of this volunteer position is to be at Field day for most of the event. Make no mistake about it; we have engineers in the club that will enjoy putting the antenna's up and configuring the on air stations. Manual labor for this position is minimal.

Volunteerism has always been at the heart of our Democracy. A national spirit of volunteerism starts at the grass roots level, our club level. Just look around at our meetings, many people have put themselves at the disposal of the greater good of operating our club for many years. What we need as an organization is a new crop of volunteers to man the positions within your club.

The time to step forward is now! Your Hobby, Your Club and Your Country needs your effort and skills.

Michael B. Harris
KC9CMT

Next Regular Meeting

The next meeting will be January 28th at 7:00PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance.

Please do not call the church for information!

Club Nets & Breakfast

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:30 p.m.** at **28.490 MHz USB.**

Our two meter FM net follows at 9:00 p.m. on our repeater at **145.390 MHz** with a minus offset and a **PL of 127.3 Hz.**

Join us for Saturday morning breakfast at **Maxim's Restaurant, 18025 W. Capitol Dr.** We usually meet at around 8:00 a.m., and order around 8:15 a.m. The food and the company are good and;

You don't have to be a member of the club to join us!

Visit our website at: **www.w9rh.org**

Or phone (414) 332-MRAC or 332 - 6722

Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the 15th of each month. If you have anything (announcements, stories, articles, photos, projects) for the 'Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: **Kc9cmt@earthlink.net**

or by Post at:

Michael B. Harris

807 Nicholson RD

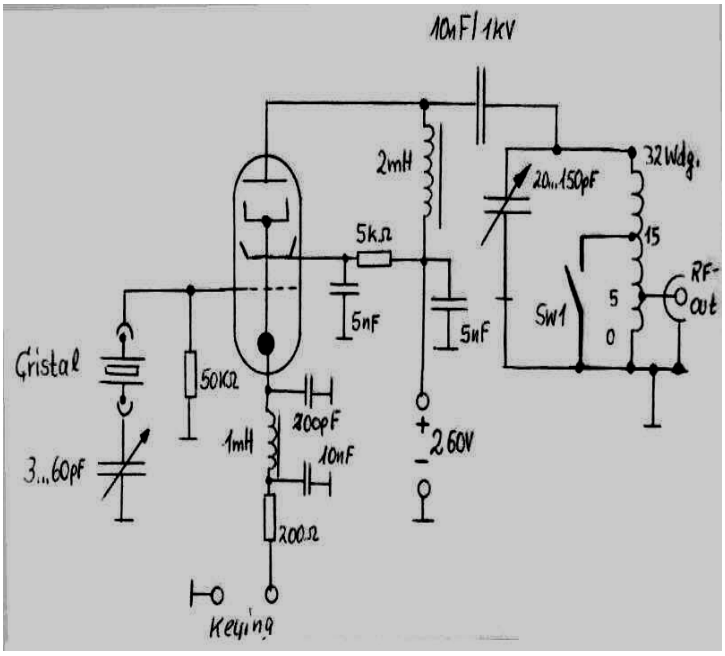
South Milwaukee, WI 53172-1447

Club Repeater,
145.390Mhz Minus Offset
(127.3 PL)

The 5 Watt single-valve transmitter

The description of this small Transmitter was found in a German Book about German Spy Equipment in WW2.
I was interested in how it works.

The circuit is standard, using a pentode type AF-amplifier tube. The crystal is connected between the grid and ground, in series with a variable capacitor to adjust the frequency by up to about 1.5Khz from the nominal frequency.
The keying is in the cathode circuit, and RF is blocked by the combination of a 1mH choke with 10nF and 200pF capacitors. The 200 ohm resistor limits the tube current.
The plate circuit contains an adjustable L-C tank. The coil is in parallel with a variable capacitance with a range of about 20...150pF (max. 250pF).
This allows operation on frequencies from 3...7.2MHz when the switch contacts are open. If they`re closed, then tuning is from 5.5...11MHz. One side of the tank circuit is grounded. The coil is around 32 turns of 0.5mm diam. insulated copper wire wound on a 28...32mm diam. plastic insulated tube. maximum coil turns.



The RF output is coupled at about 1/6 of the 0.5mm diam. insulated copper wire wound on a 28...32mm diam. plastic insulated tube.
The RF output is coupled at about 1/6 of the maximum coil turns.
The plate gets its voltage via an RF choke of about 2mH. The voltage is about 260 volts at a max. current of 50mA.

Between the plate and tank circuit it is necessary to use a coupling capacitor with a high DC isolation rating. Use a new 600 or 1000 volt ceramic or styroflex type, with a value of about 10...50nF.

Use 1/2 watt rated resistors. All other capacitors should be 350V ceramic types. The value of the parts can vary by up to +/- 50%.

Different types of tubes can also be used. Most of the AF-amp types will work e.g. EBL 21/71 - EL84/6BQ5 - EL86/6CW5 - EL95/6DL6 - 6L6-6V6

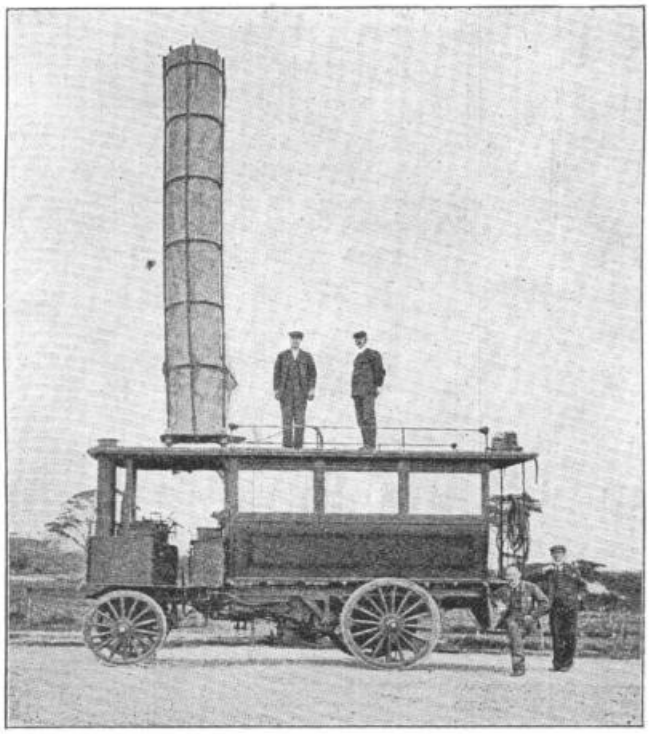
Between the transmitter and my longwire antenna use an antenna tuner for good adjustment and harmonic suppression.

For receive use a any HF radio that has narrow IF -Filters and good preselection. This is particularly necessary during the evenings on the 40m band. This circuit has worked a lot of European stations with 2-way QRP operation and good signal strength on both sides.

So, good "CW-ing" and think about the **High-Voltage** in your transmitter!!!

Western Electrician, July 27, 1901, page 51:

Military Automobile for Wireless Telegraphy.



MILITARY AUTOMOBILE FOR WIRELESS TELEGRAPHY.

In the accompanying illustration is shown a portable outfit for wireless telegraphy, designed by Mr. Marconi and especially adapted for military requirements. It is an outgrowth of experience in the South African war and is described by an English correspondent of the Scientific American, to which journal the Western Electrician is indebted for the particulars here given. For some time past Marconi has been experimenting with cylinders to act as receivers in lieu of the high wire or antenna. These cylinders have been proved to be more efficacious for the transmission of messages over short distances, than the ordinary apparatus. When the electric currents are excited, the waves at first oscillate very rapidly and violently, but in a few moments the vibrations die down, or become damped, in much the same way as the wire of a piano decreases its vibrations after a note has been struck. It is imperative that these vibrations should be sustained as much as possible, in order to travel over a long distance, and to insure this end there must be a great capacity in the sending instruments. The effect of the cylinder is to render greater capacity than the ordinary aerial wire, and consequently to secure more sustained vibrations.

The automobile shown in the illustration is the Thorncroft steam-motor car, or lorry, which is now so much used in England for heavy road traffic. The car has a capacity for about five tons, and can attain a speed of from 12 to 14 miles an hour with a full load. The rear part of the lorry is fitted up as an operating room, containing instruments and electric batteries. Upon the roof of the car the long cylinder is placed. In the picture the cylinder is shown raised ready for use, but when not required it is laid down flat upon the roof, out of the way. The cylinder is about 25 feet in height.

It is constructed of metal and thoroughly insulated. The points from which the currents are transmitted into, and received from, space may be observed at the top of the cylinder, and wires connect them with the instruments below. One special recommendation of this migratory installation is that communication can be maintained while the vehicle is traveling. The maximum distance over which messages can be dispatched and received by means of this installation is 20 miles at present, which is generally sufficient for military purposes. Marconi, however, is still continuing his experiments with a view to increasing this distance. The cylinder is said to perform exactly the same functions as the aerial wire, even in connection with the tuned or synchronized messages.

Although Marconi is still continuing his investigations with the cylinders, his principal experiments are still concerned with the perfection of the original system. Although Marconi has found the cylinders to be specially valuable for the transmission of messages over short distances, up to about 30 miles, it has not been found so successful in the case of long distances.

Q&A ON POWER FOR ARES OPS

Emergency power is often the critical link in any ARES operation. The following Q&As on this subject were harvested from an article written by ARRL Lab staff.

Start by considering your power source. If a larger, sustained operation is indicated, consider a generator.

Q. Our ARES group has a small 600-watt generator available. Will that be enough for four transceivers?

A. Not if they're typical "100-watt" transceivers. That's only 400 watts, you say? Not exactly. You'll have to calculate the total power requirements for all equipment you intend to use, including the station lights and accessories. To determine how much generator power you need, start by making a list of the power consumption of your station equipment (which will be much more than its RF power output). If you're lucky, some of the equipment may have its power consumption listed in the owner's manual or on the enclosure. If only current consumption is provided, multiply the current in amps by 120 volts to determine the power consumption in watts. If there is no information available on the unit's power consumption, two rules of thumb may help: (1) A transmitter will usually operate at about 50% efficiency, so double the RF output to obtain the amount of power required. (2) The equipment fuse is usually rated at 150- to 200% of the actual current draw, so multiply the fuse value by 0.5 to 0.67 to calculate the approximate current consumption. Use one of these steps for all station equipment, including accessories and lighting.

Now, determine how much of this equipment will be operated simultaneously -- perhaps four transceivers, two 100-watt lights, and several accessory items such as CW keyers, voice keyers, etc. If you are going to use the generator to power a piece of non-station equipment, such as a coffee pot, you'll need to include it as well. Some equipment may require more power than you have calculated, so adding a few hundred watts to your estimate is a good idea. Let's look at a typical calculation based on using only one HF transceiver: Transceiver 400 watts, Laptop computer 40 watts, Lamp 60 watts, and Soldering iron 100 watts, for a total of 600 watts.

Some generators have a continuous power rating and an intermittent power rating. If you find that the total station requirement exceeds the available generator power, remember that transceivers draw full power only in transmit, and that they're not going to be in transmit 100% of the time. They could, however, all be in transmit simultaneously, so you need to make sure that the total possible power consumption doesn't exceed the intermittent power rating of the generator. Check the output voltage and frequency, if possible. If the generator doesn't have a built-in overvoltage protector, make sure the voltage is correct before you use the generator to power your equipment.

Also, check the generator for radio noise. Some generators are not fully suppressed for ignition noise. You would rather find this out now than at the disaster site. If there is a problem, it may be possible to use resistor-type spark plugs or spark-plug wires. Check the owner's manual. You can also connect the generator to a good earth ground with a ground rod.

Q. We won't have generator capability at our disaster site. How about battery use?

A. Keep in mind that an automotive lead-acid battery was designed for one task -- to deliver a lot of current for a brief period of time. Its output voltage does not remain constant during its discharge cycle, and it is not a good idea to discharge it completely. An automobile battery won't tolerate too many deep-discharge cycles before it's ruined!

A deep-discharge lead-acid battery is much better suited to your needs. It can be discharged repeatedly without damage, and will maintain full output voltage over much of its discharge cycle. You'll find this type of battery at automotive and marine parts supply outlets. They are not much more expensive than regular automobile batteries and are designed to deliver moderate current for long periods of time.

Q. Is it possible to operate using batteries with a 100-watt transceiver?

A. Yes, but you may find that a 100-watt station is a heavy drain on your battery. A car battery would probably last only a few hours--less if it's cold. (Cold batteries lose up to 70% of their capacity.) A deep-cycle battery has a typical capacity of 1000 watt-hours, but you may not be able to use all of this capacity with a transmitter or receiver: As the battery discharges, its output voltage drops. When it drops below 12 volts or so, most amateur equipment will not function properly.

Q. Well, I can recharge the battery, right?

A. Yes, from commercial mains or a gasoline-powered generator. Alternative sources of charging power, such as solar panels or wind-driven generators, can be used.

Q. Solar power sounds interesting. Is a solar panel difficult to use?

A. No. Solar panels have only two wires to connect to your battery or circuit - one positive, one negative. Some solar panels have a diode in series for polarity protection and to reduce current flow from the battery back through the solar panel. This is no longer the case with many modern panels, particularly the larger ones where efficiency is important. Tests have shown the diode causes more energy loss during the day than the very small wattage dissipated in the solar panel at night.

Solar panels typically deliver 15 to 18 volts at 600 to 1500 mA in full sunlight. This will not damage a high-capacity battery, such as a deep-cycle unit. All you need do is hook up the battery, put the solar panel in full sunlight, and charge away. The battery will regulate the maximum voltage from the panel.

If you're going to use a solar panel to recharge a smaller battery, such as a Nickel-Cadmium (NiCd) battery or gelled-electrolyte lead-acid battery, you'll need to pay a bit more attention to detail. These types of batteries can suffer damage if charged too quickly, so a regulated charge is necessary. The ARRL Handbook has several solar-panel charging and regulator circuits.

WISCONSIN Monthly ARES Section News Continued:

Q. A large lead-acid battery sounds a bit heavy. Are there any other types of batteries that we can use?

A. It depends on how long you want to operate. If you're planning only a few hours of low-power operation, you might be able to get away with using dry cells, either standard carbon-zinc or alkaline. (Don't forget that a carbon-zinc or alkaline battery should not be recharged!) An alkaline cell can deliver quite a bit of current and will last a surprisingly long period of time. NiCd batteries are usually not suitable for sustained operation above a few watts, but if you are planning to recharge them from solar power, they may be good for quite a few hours. If you do use NiCd batteries, do not allow them to become fully discharged. This can cause permanent damage.

Medium capacity lead-acid batteries are made with a gelled electrolyte. These are commonly called gel cells. In most cases, they are completely sealed and can be operated in any position. They are available in a variety of sizes, ranging from 1 Ah to about 50 Ah. (A list of suppliers is found at the end of Chapter 35 of the ARRL Handbook, or go to http://www.arrl.org/tis/tisfind.html and search the keyword BATTERY). Gel cells are a good compromise between portability, capacity and ease of use. They must be charged properly, though. If you charge them too fast, bubbles can develop in the electrolyte, permanently damaging the battery. They should be charged at no more that about 10% of their output rating in ampere-hours.

Q. Someone told me that there is a device that will convert 12 volts from a battery to 120 volts ac. Why can't I use one of these?

A. You can! The device is known as a dc-ac converter, or inverter. It converts 12 volts to a square-wave ac output at approximately 60 Hz. Inverters are limited to about 100 to 400 watts, however, and some equipment (especially motors!) cannot be powered by a square wave. An inverter will run a few light bulbs or a small soldering iron and can be a useful addition to a battery-powered station. Some newer ones use switching technology and are quite lightweight. (Test them ahead of time, though. They may generate RF noise or run hot at full output.)

Q. Does the ARRL have any information about emergency power?

A. The ARRL Handbook discusses all types of emergency power, ranging from batteries, to solar power and solar-panel charger circuits, to ac generators. QRP Classics contains reprints of several QST articles about emergency power. See the ARRL publications catalog on the ARRL Web site for more information. Also see the rest of the Emergency/Alternative Power TIS Web page, also on the ARRL Web site. Consider purchasing Emergency Power for Radio Communications

by Michael Bryce, WB8VGE, published by ARRL

ARRL Weekly Newsletter Articles

FIRST CHINESE AMATEUR RADIO SATELLITE NOW IN SPACE

AMSAT China (CAMSAT **<http://www.camsat.cn/>**) reports that at around 0230 UTC on December 15, China launched its first Amateur Radio satellite -- named XW-1 into space.

The microsatellite -- a secondary payload aboard the CZ-4C rocket launched from the Taiyuan Satellite Launch Center -- was launched into a Sun-synchronous orbit with an apogee of approximately 1200 kilometers. XW-1 successfully reached orbit at 0253 UTC. Members of the XW-1 launch team reported they received a beacon from the satellite shortly after the satellite deployed. In the first few days, the XW-1 team will work on the satellite's FM and store-forward transponder mode and its linear transponder mode. Once those tests are complete, they will upload a new flight program to set up the payload schedule. The satellite's communications payload includes a beacon and three crossband transponders operating in FM, SSB/CW and digital modes. Uplink and downlink frequencies can be found on the CAMSAT Web site

For the latest Keplerian elements for XW-1 and other satellites, check out the W1AW Keplerian Bulletins **<http://www.arrl.org/w1aw/kep/>.**

UTAH HAMS COORDINATE RESCUE

In areas where cell phone signals just won't work, Amateur Radio gets through. That's what Brent Yeates, KA7FAP, of North Logan, Utah, found out just before noon on Wednesday, December 2: He came across a dairy truck that had crashed and rolled over in the Logan River as he drove on Route 89 through Logan Canyon. As 38,000 pounds of dairy products were spilling into the Logan River, Yeates waded through the cold river to help get the driver out of the truck's cab and then put out a call on his handheld transceiver.

Testing & Local Swapfests

VE Testing

Testing Session on January 30th, 9am-11am.

Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223

Swapfests

Capitol City Swapfest, January 23rd.

Fitchburg Wisconsin **http://www.wd8das.net/hamfest**

Saturday, January 23th, 2010, 8am– 2pm

Tri County Amateur Radio Club Swapfest March 14th.

Jefferson County Fairgrounds, Activity Center

503 North Jackson Avenue

Jefferson, WI 53549

Working Committees

Field Day

- Open

FM Simplex Contest

- Joe – N9UX
- Jeff – K9VS
- Brian— K9LCQ

Ticket drum and drawing

- Tom – N9UFJ
- Jackie – No Call

Newsletter Editor

- Michael-KC9CMT

Webmaster

- Joe Schwartz—N9UX

Refreshments

- Michael – KC9CMT

Membership Information

The Hamateur Chatter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are $17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information Our website address http://www.w9rh.org

Telephone (414) 332-MRAC (6722)

Address correspondence to:

MRAC PO Box 070695,

Milwaukee WI 53207-0695.

Email may be sent to

w9rh@arrl.net

Our YAHOO newsgroup:

http://groups.yahoo.com/group/MRAC-W9RH/

CLUB NETS:

- Our Six Meter SSB net is Thursday at 8:00PM on 50.160 MHz USB
- Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz ± 5 KHz USB.
- Our Two Meter FM net follows the Ten meter net at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)

Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Mon.8:00 PM 146.865- ARES Walworth ARRL News Line

Mon.8:00 PM 146.445 Emergency Net

Mon.8:00 PM 146.865- ARES Net Walworth

Mon.8:45 PM 147.165- ARRL voice news (ARES)

Mon.9:00 PM 50.160 6 mtr .SSB NET

Mon.9:00 PM 147.165- ARES Net Waukesha-Milwaukee

Tue.9:00 AM 50.160 6 . Mtr 2nd Shifter's Net

Tue. 7:00 PM 145.130 MAARS Trivia Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Wed. 8:00 PM 145.130 MAARS Amateur Radio Newsline

Wed. 9:00 PM 145.130 MAARS IRLP SwapNet

Thur. 8:00 PM 50.160, 6 mtr SSB Net

Thur. 9:00 PM 146.910 Computer Net

Fri. 8:30 PM 28.490 MRAC W9RH 10 mtr Net SSB

Fri. 9:00 PM 145.390 W9RH 2 mtr. FM Net

Sat. 9:00 PM 146.910 Saturday Night Fun Net

Sun 8:30 AM 3.985 QCWA (Chapter. 55) SSB Net

Sun 9:00 AM 145.565 X-Country Simplex Group

Sun.10:00 AM 443.800+ FM-38 link to 146.88 Baraboo SWAP Net

Sun 9:00 PM 146.910 Swap Net

Sun 8:00 PM 146.910 Information Net

Sun.8:00 PM 28.365 10/10 International (Milwaukee Ch.) (SSB)

2 meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

SSB frequencies below 20 meters are LSB and for 20 mtrs and above are USB.

Why One Inch Hail Criterion?

Figure: The minimum size hail criterion for severe thunderstorms changes from 3/4 inch (penny-size) to 1 inch (quarter-size) nationwide on January 5, 2010.

Previously, the National Weather Service (NWS) issued Severe Thunderstorm Warnings whenever a thunderstorm is forecast to produce wind gusts to 58 miles per hour (50 knots) or greater and/or hail size 3/4 inch (penny-size) diameter or larger. For the past few years, offices that cover areas of Kansas have experimented using a warning criterion of one inch diameter hail. During the spring and early summer of 2009, this experiment expanded to other areas in the Central and Western U.S.

Beginning January 5, 2010, the minimum size for severe hail nationwide increases to **one inch (quarter-size)** diameter. There will not be a change to the wind gust criterion of 58 mph.

This change is based on research indicating significant damage does not occur until hail size reaches 1 inch (quarter-size) in diameter, and as a response to requests by core partners in emergency management and the media. Particularly in areas of the Central U.S., the frequency of severe thunderstorm warnings issued for penny-size and nickel size hail might have de-sensitized the public to take protective action during a severe thunderstorm warning
In areas that experimented with changing to the one inch hail criterion, media partners stated their user feedback suggests warnings are now more meaningful. In addition, television networks receive fewer viewer complaints from breaking into programming for non-damaging storms. The Emergency Management community in those areas agreed that warnings carry more weight, and spotters now concentrate on the more significant events.